CLAIMS

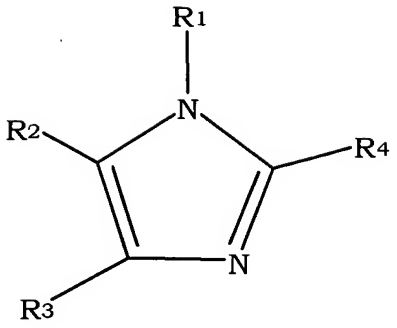
1. A metal-coated resin molded article comprising a substrate made of a resin composition and a metal layer formed on said substrate, wherein said resin composition comprises a liquid-crystalline polyester and an epoxy-group containing ethylene copolymer,

said epoxy-group containing ethylene copolymer contains 50 to 99.9 wt% of an ethylene unit and 0.1 to 30 wt% of at least one of an unsaturated carboxylic acid glycidyl ester unit and an unsaturated glycidyl ether unit in the molecule thereof, and

a content of said epoxy-group containing ethylene copolymer is in a range of 0.1 to 25 parts by weight with respect to 100 parts by weight of said liquid-crystalline polyester.

2. The metal-coated resin molded article as set forth in claim 1, wherein said liquid-crystalline polyester is a reaction product obtained by an ester-exchange and polycondensation reaction of at least one of an aromatic dicarboxylic acid and an aromatic hydroxycarboxylic acid with an acylated compound obtained by acylating a phenolic hydroxyl group of at least one of an aromatic diol and an aromatic hydroxycarboxylic acid with a fatty acid anhydride.

3. The metal-coated resin molded article as set forth in claim 1, wherein said liquid-crystalline polyester is the reaction product obtained by performing the ester-exchange and polycondensation reaction in the presence of an imidazole compound represented by the following chemical formula:



wherein, each of "R_1" to "R_4" is selected from hydrogen atom, alkyl group having a carbon number of 1 to 4, hydroxymethyl group, cyano group, cyanoalkyl group having a carbon number of 1 to 4, cyanoalkoxy group having a carbon number of 1 to 4, carboxyl group, amino group, aminoalkyl group having a carbon number of 1 to 4, aminoalkoxy group having a carbon number of 1 to 4, phenyl group, benzyl group, phenylpropyl group, and a formyl group.

4. The metal-coated resin molded article as set forth in claim 1, wherein said epoxy-group containing ethylene copolymer contains 80 to 95 wt% of the ethylene unit and 5 to 15 wt% of at least one of the unsaturated carboxylic acid glycidyl ester unit and the unsaturated glycidyl ether unit in the molecule thereof.

5. The metal-coated resin molded article as set forth in claim 1, wherein said resin composition contains a fiber-like inorganic filler having a diameter of 6 to 15 μm and an aspect ratio of 5 to 50.

6. The metal-coated resin molded article as set forth in claim 1, wherein said resin composition contains 20 to 235 parts by weight of a whisker with respect to 100 parts by weight of said liquid-crystalline polyester.

7. The metal-coated resin molded article as set forth in claim 1, wherein said resin composition contains 10 to 40 parts by weight of a plate-like inorganic filler with respect to 100 parts by weight of said liquid-crystalline polyester.

8. The metal-coated resin molded article as set forth in claim 1, wherein said metal layer is made of a metal material selected from the group essentially consisting of copper, nickel, gold, aluminum, titanium, molybdenum, chromium, tungsten, tin, lead, brass, Nichrome and an alloy thereof.

9. The metal-coated resin molded article as set forth in claim 1, wherein said metal layer is formed in a circuit pattern.

10. A method of producing a metal-coated resin molded article comprising the steps of

molding a resin composition to obtain a substrate; and

forming a metal layer on a surface of said substrate,

wherein said resin composition comprises a liquid-crystalline polyester and an epoxy-group containing ethylene copolymer, said epoxy-group containing ethylene copolymer contains 50 to 99.9 wt% of an ethylene unit and 0.1 to 30 wt% of at least one of an unsaturated carboxylic acid glycidyl ester unit and an unsaturated glycidyl ether unit in the molecule thereof, and a content of said epoxy-group containing ethylene copolymer is in a range of 0.1 to 25 parts by weight with respect to 100 parts by weight of said liquid-crystalline polyester.

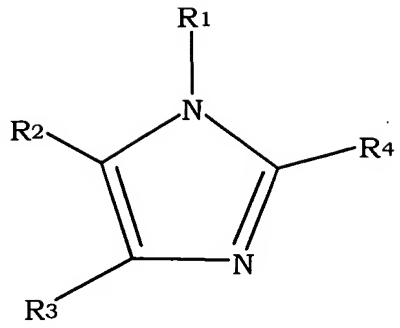
11. The method as set forth in claim 10 comprising the step of performing a plasma treatment to the surface of said substrate prior to the formation of said metal layer.

12. The method as set forth in claim 10, wherein said metal layer is formed by physical vapor deposition.

13. The method as set forth in claim 10 comprising the step of performing a heat treatment to said substrate at a temperature between a lower limit temperature calculated by subtracting 120°C from a flow-beginning temperature of said liquid-crystalline polyester, and an upper limit temperature calculated by subtracting 20°C from the flow-beginning temperature.

14. The method as set forth in claim 10, wherein said liquid-crystalline polyester is prepared by an ester-exchange and polycondensation reaction of at least one of an aromatic dicarboxylic acid and an aromatic hydroxycarboxylic acid, with an acylated compound obtained by acylating a phenolic hydroxyl group of at least one of an aromatic diol and an aromatic hydroxycarboxylic acid with a fatty acid anhydride.

15. The method as set forth in claim 14, wherein the ester-exchange and polycondensation reaction is performed in the presence of an imidazole compound represented by the following chemical formula:



wherein, each of "R_1" to "R_4" is selected from hydrogen atom, alkyl group having a carbon number of 1 to 4, hydroxymethyl group, cyano group, cyanoalkyl group having a carbon number of 1 to 4, cyanoalkoxy group having a carbon number of 1 to 4, carboxyl group, amino group, aminoalkyl group having a carbon number of 1 to 4, aminoalkoxy group having a carbon number of 1 to 4, phenyl group, benzyl group, phenylpropyl group, and a formyl group.

16. The method as set forth in claim 10 comprising the step of forming a circuit pattern in said metal layer by laser patterning.